General and Classified Index

COMBUSTION, Volume Twelve, July 1940 through June 1941

EDITORIALS—

		Page
Burning a Variety of Coals	Apr. 1941	21
Census Figures on Industrial Power	May 1941	33
Coal and Preparedness	July 1940	25
Deferment for Engineers	Mar. 1941	31
Designing for the Emergency	Jan. 1941	21
Duplicate or Standard Designs Expedite Preparedness	Sept. 1940	25
Engineering News from Abroad	June 1941	23
Few Courses in Marine Engineering	Dec. 1940	19
Forced Circulation on a Large Scale	Aug. 1940	15
Improved Boiler Performance	May 1941	33
Increased Enrollment in Engineering Schools	July 1940	25
Influence of Experience and Research on Design of Large Units	Nov. 1940	29
Is Your Power Plant Ready?	Oct. 1940	21
Large Petroleum Production	Jan. 1941	21
Let There Be Safeguards	Feb. 1941	21
Market for Engineers, The	Dec. 1940	19
Meeting Power Demands for 1941 and 1942	Mar. 1941	31
Mercury-Vapor Cycle, The	Apr. 1941	21
1940 Power Show	Nov. 1940	29
Port Washington Station Sustains Its High Performance	Feb. 1941	21
Power Facilities	July 1940	25
Power for Defense	June 1941	23
Questionable Precautions	Oct. 1940	21
St. Lawrence Agreement, The	Apr. 1941	21
St. Lawrence Power	Jan. 1941	21
St. Lawrence Power Advances	Nov. 1940	29
Some Probable Effects of Minimum Coal Prices	Sept. 1940	25
Threatened Oil Shortage Creates Stoker Demand	June 1941	23
Uniform Abbreviations and Symbols	May 1941	33
Waste of Engineering Talent Among Reserve Officers, A	Aug. 1940	15

ARTICLES—

		Page
A.S.M.E. Annual Meeting	Dec. 1940	27
Methods of Silica Removal. Harold Farmer, H. L. Tiger, L. D. Betz, C. A. Noll and J. J. Maguire		*27*
Treatment of Makeup at Waterside Stations. C. B. Arnold, R. T. Hanlon and J. Mindheim		*29*
Conductivity Determinations. F. G. Straub and E. E. Nelson		*29*
Coal-Ash Fusing Temperature. E. G. Bailey and F. G. Ely		*30*
An Unique Engine and Boiler Unit. S. L. G. Knox and J. I. Yellott		*31*
Fuel-Bed Observations on Multiple-Retort Stoker. M. A. Mayers and B. S. Murphy		*32*
Circulation in High-Pressure Boilers and Water-Cooled Furnaces. J. Van Brunt		*33*
Twin-Furnace Boilers. J. Blizard and A. C. Foster		*33*
Boiler Settings. Max H. Kuhner		*34*
Turbine Lubrication. C. Dantsizen		*34*
Condenser Tube Corrosion. C. W. E. Clarke, A. E. White and C. Upthegrove		*35*
Solving Pipe Problems. Fred M. Hill		*36*
Effect of Grain Size in Steam Piping. A. E. White and Sabin Crocker		*36*
Power in Ships. E. G. Bailey, L. M. Rakestraw, E. D. Dickinson, J. A. Davies, Paul Bancel and H. E. Carleton		*36*
A.S.T.M. Papers Discuss Creep	Aug. 1940	22
Appalachian Coals, Inc., Fuel Engineering Conference	July 1940	47
Application of Fan Laws. By G. A. Hendrickson	July 1940	39
Application of Heat Insulation. By E. C. Hasse	June 1941	24
Ash-Bearing Constituents vs. Pulverizing Power (Excerpt, Annual Report of Research and Technologic Work on Coal by Bureau of Mines). By A. C. Fieldner and W. E. Rice	Jan. 1941	25
Baltimore Initiates Expansion Program With 25,000-Kw. Topping Unit. By H. N. Boetcher and G. S. Harris	Mar. 1941	32
Bituminous Coal Prices Announced	Aug. 1940	31
Boiler Embrittlement Protection. By Cyrus W. Rice	Jan. 1941	37
Boiler Inspectors Meet at New York	June 1941	40
Buzzard Point Adds 100,000 Kw in the Nation's Capital. By C. E. Miller	Dec. 1940	20
Chemical Cleaning of Heat Exchangers. By John M. Drabelle	Apr. 1941	47
Combustion of Waste-Wood Products. By H. W. Beecher and R. D. Watt	Sept. 1940	35
Controlling Characteristics of Ash, With Special Reference to Illinois and Indiana Coals. By Joseph Harrington	May 1941	41
Determination of Steam Quality with Throttling Calorimeter. By P. B. Place	July 1940	29
Dresser Station Adds 50,000 Kw. By H. E. Matson	Apr. 1941	22
Economizer Corrosion	Sept. 1940	29
Economy in Boiler-Water Recirculation. By M. D. Baker	Oct. 1940	31
Increased Power Capacity (E.E.I.)	Jan. 1941	25
Efficiency Relationships. By Lybrand Smith	Sept. 1940	31
Embrittlement Detector. By Messrs. Schroeder, Berk and O'Brien	Aug. 1940	19
Enthalpy and Entropy—The First and Second Laws of Thermodynamics. By Dr. Erich F. Leib	Oct. 1940	35
Factors Affecting Metal Temperature of Furnace and Boiler Tubes. By W. S. Patterson	Aug. 1940	24
Factors Influencing Selection of Steam Generating Equipment. By L. J. Marshall	Nov. 1940	31
Flashing Calorimeter, The. By A. A. Markson and Y. A. Olson.	May 1941	51
Fuel Consumption by Industry (Census Report)	June 1941	44
Fuel Oil Burning. By Zuce Kogan	Nov. 1940	47
Furnace Temperature Measurements and Their Interpretation. By H. Kreisinger, B. J. Cross and E. H. Kennedy	Mar. 1941	37
Giant Stokers. Cedar Plant, Pennsylvania Power & Light Co., Harrisburg	Nov. 1940	30
High-Pressure Extension to Manchester St. Station. By A. S. Davis and George Hirsch	Sept. 1940	26
High-Speed Turbines. Glenn B. Warren	July 1940	43
High Spots of the Midwest Power Conference	May 1941	34
Power and National Defense. Major Charles W. Leihy, C. W. Kellogg, R. B. McWhorter, W. J. McLachlan		*34*
Increasing Steam Output. Prof. R. S. Hawley, Charles W. Parsons		*35*
Power Trends. Prof. A. G. Christie		*36*
Steam Turbine Design. C. C. Franck		*36*
Forced Circulation. F. H. Rosencrants		*36*
What the User Should Know. Alfred Iddles		*37*
Water-Treatment Problems. Prof. F. G. Straub		*38*
Removal of Dissolved Gases. A. E. Kittredge		*38*
Interchange Contracts Between Industrial Plants and Utilities. John T. Davis		*39*
Variable-Speed Drives. G. V. Edmonson		*39*
Priorities of Men. Dr. Harvey N. Davis		*39*
How the C-E Steam Tables Were Derived. By Dr. Erich F. Leib	Mar. 1941	48
Industrial Machinery That Passes with Sale of Premises. By Leslie Childs	Jan. 1941	39
Installation of Thermocouples for Measuring Tube Temperatures. By R. M. Van Duzer, Jr., and R. J. McCausey	Aug. 1940	16
Lampblack Fired Under Boiler at Honolulu Gas Co., Ltd. By T. C. Beatty	Apr. 1941	39
Large Forced-Circulation Boiler for Somerset Station	Aug. 1940	21
Low-Cost Flue-Dust Sampler	Aug. 1940	23
Measuring Pulsating Flow. By William Melas	May 1941	49
Mercury-Vapor Process, The. By A. R. Smith and E. S. Thompson	Apr. 1941	28
Metals at High Temperatures in Power Plants. By A. E. White and C. L. Clark	July 1940	35
Million-Pound per Hour Boiler Tops Sherman Creek Station	Sept. 1940	34
Modernizing Settings of Traveling-Grate Stokers. By O. J. Macan	Nov. 1940	43
More Power for Piedmont Carolinas at Cliffside. By Edward E. Williams	Oct. 1940	22
New Mercury Boiler	Jan. 1941	39
Oil Shale as Boiler Fuel. By H. R. Taube	July 1940	45
Operation of Centrifugal Boiler-Feed Pumps. By Hans Gartmann	Jan. 1941	33
pH by Simple Titration. By William Maddock	Aug. 1940	30
Physical Aspects of Steam Generation at High Pressures. By R. F. Davis	Feb. 1941	33
Plan of Smoke Abatement Suggested for Pittsburgh	June 1941	46
Power Plant of the S. S. *America*	July 1940	37
Putting a New Boiler in Service. By Alan Ruch	May 1941	47
Recovery of SO_2 from Stack Gases	Feb. 1941	37
Recovery Unit for Sulphate Process Applied to Chemical Recovery and By-Product Steam Production. By F. H. Rosencrants	Mar. 1941	44
Removal of Silica from Industrial Boiler-Water Supplies. By S. E. Tray and T. L. Pankey	Nov. 1940	39
Significance of Iron in Coal Used for Combustion, The. By Dr. A. H. Moody	Feb. 1941	22
Size Grading Applied to Terminal Velocity of Fly Ash and Other Dusts. By Hudson H. Bubar	June 1941	36
Sizing of Coal for Chain- or Traveling-Grate Stokers. By Walter Wood	Sept. 1940	39
Some Early Boiler Designs	Nov. 1940	34
Some Further Power Statistics. (Federal Power Commission)	Oct. 1940	43
Spanish Terms for Steam Equipment	Jan. 1941	40
Steam Generating Plant of the Atlantic Gelatin Company, Inc. By Albert A. Fava	June 1941	32
Steam Generating Units at Argentine Sugar Plant of Ingenio San Martin de Tabacal. By C. Mellor and E. Patron Costas	Jan. 1941	22
Steam Generation Trends in 1940	Sept. 1940	42
Steelton Plant Burns Coke Breeze and Anthracite on Traveling-Grate Stokers. By H. K. Miller	July 1940	26
Superheaters and Economizers, Their Design and Safe Operation. By H. B. Oatley	June 1941	38
Trends in Steam Plant Development. By A. G. Christie	Apr. 1941	35
Turbulence and Combustion in Pulverized-Coal Furnaces. By B. J. Cross	Nov. 1940	49
Utilizing Refuse Coals at 12th St. Station, Richmond, Va. By J. A. Reich	Apr. 1941	43
Viscosity of Steam, The. By Dr. E. F. Leib	Dec. 1940	45
Waste-Heat Boilers. By J. B. Crane	Jan. 1941	27

PAGE

Water-Conditioning Methods and Trends. By C. E. Joos..... Dec. 1940 38
Water Treatment at South Omaha Steam-Electric Station. By R. R. Briggs.....Feb. 1941 27
West Penn Tops Windsor.....July 1940 42

AUTHORS—

Arnold, Charles B. and R. T. Hanlon, J. Mindheim—*Treatment of Makeup at Waterside Stations*, A.S.M.E. Annual Meeting..... Dec. 1940 29
Bailey, E. G. and F. G. Ely—*Coal-Ash Fusing Temperature*, A.S.M.E. Annual Meeting.....Dec. 1940 30
Bailey, E. G. and L. M. Rakestraw—*Power in Ships*, A.S.M.E. Annual Meeting.....Dec. 1940 36
Baker, M. D.—Economy in Boiler-Water Recirculation..Oct. 1940 31
Bancel, Paul and H. E. Carleton—*Power in Ships*, A.S.M..E Annual Meeting.....Dec. 1940 36
Beatty, T. C.—Lampblack Fired Under Boiler at Honolulu Gas Co., Ltd.....Apr. 1941 39
Beecher, H. W. and R. D. Watt—Combustion of Waste-Wood Products.....Sept. 1940 35
Betz, L. Drew and C. A. Noll, J. J. Maguire—*Methods of Silica Removal*, A.S.M.E. Annual Meeting.....Dec. 1940 28
Blizard, John and A. C. Foster—*Twin-Furnace Boilers*, A.S.M.E. Annual Meeting.....Dec. 1940 33
Boetcher, H. N. and G. S. Harris—Baltimore Initiates Expansion Program With 25,000-Kw Topping Unit.....Mar. 1941 32
Briggs, R. R.—Water Treatment at South Omaha Steam-Electric Station.....Feb. 1941 27
Bubar, Hudson H.—Size Grading Applied to Terminal Velocity of Fly Ash and Other Dusts.....June 1941 36
Carleton, H. E. and Paul Bancel—*Power in Ships*, A.S.M.E. Annual Meeting.....Dec. 1940 36
Childs, Leslie—Industrial Machinery That Passes With Sale of Premises.....Jan. 1941 39
Christie, A. G.—Trends in Steam Plant Development..Apr. 1941 35
Power Trends, High Spots of the Midwest Power Conference... May 1941 36
Clark, C. L. and A. E. White—Metals at High Temperatures in Power Plants.....July 1940 35
Clarke, C. W. E. and A. E. White, C. Upthegrove—*Condenser Tube Corrosion*, A.S.M.E. Annual Meeting.....Dec. 1940 35
Costas, E. Patron and C. Mellor—Steam Generating Units at Argentine Sugar Plant of Ingenio San Martín de Tabacal..... Jan. 1941 22
Crane, J. B.—Waste-Heat Boilers.....Jan. 1941 27
Crocker, Sabin and A. E. White—*Effect of Grain Size in Steam Piping*, A.S.M.E. Annual Meeting.....Dec. 1940 36
Cross, B. J.—Turbulence and Combustion in Pulverized-Coal Furnaces.....Nov. 1940 49
Cross, B. J. and H. Kreisinger, E. H. Kennedy—Furnace Temperature Measurements and Their Interpretation.....Mar. 1941 37
Dantsizen, C.—*Turbine Lubrication*, A.S.M.E. Annual Meeting.. Dec. 1940 34
Davies, J. A. and E. D. Dickinson—*Power in Ships*, A.S.M.E. Annual Meeting.....Dec. 1940 36
Davis, A. S. and Geo. Hirsch—High-Pressure Extension to Manchester St. Station.....Sept. 1940 26
Davis, Harvey N.—*Priorities of Men*, High Spots of the Midwest Power Conference.....May 1941 39
Davis, John T.—*Interchange Contracts Between Industrial Plants and Utilities*, High Spots of the Midwest Power Conference... May 1941 39
Davis, R. F.—Physical Aspects of Steam Generation at High Pressures.....Feb. 1941 33
Dickinson, E. D. and J. A. Davies—*Power in Ships*, A.S.M.E. Annual Meeting.....Dec. 1940 36
Drabelle, John M.—Chemical Cleaning of Heat Exchangers..... Apr. 1941 47
Edmonson, G. V.—*Variable-Speed Drives*, High Spots of the Midwest Power Conference.....May 1941 39
Ely, F. G. and E. G. Bailey—*Coal-Ash Fusing Temperature*, A.S.M.E. Annual Meeting.....Dec. 1940 30
Farmer, Harold—*Methods of Silica Removal*, A.S.M.E. Annual Meeting.....Dec. 1940 27
Fava, Albert A.—Steam Generating Plant of the Atlantic Gelatin Company, Inc.....June 1941 32
Fieldner, Arno C. and W. E. Rice—Ash-Bearing Constituents vs. Pulverizing Power (excerpt Annual Report of Research and Technologic Work on Coal by Bureau of Mines).....Jan. 1941 25
Foster, A. C. and John Blizard—*Twin-Furnace Boilers*, A.S.M.E. Annual Meeting.....Dec. 1940 33
Franck, C. C.—*Steam Turbine Design*, High Spots of the Midwest Power Conference.....May 1941 36
Gartmann, Hans—Operation of Centrifugal Boiler-Feed Pumps.. Jan. 1941 33
Hanlon, R. T. and C. B. Arnold, J. Mindheim—*Treatment of Makeup at Waterside Stations*, A.S.M.E. Annual Meeting..Dec. 1940 29
Harrington, Joseph—Controlling Characteristics of Ash With Special Reference to Illinois and Indiana Coals.....May 1941 41
Harris, G. S. and H. N. Boetcher—Baltimore Initiates Expansion Program With 25,000-Kw Topping Unit.....Mar. 1941 32
Hasse, E. C.—Application of Heat Insulation.....June 1941 24
Hawley, Prof. R. S.—*Increasing Steam Output*, High Spots of the Midwest Power Conference.....May 1941 35
Hendrickson, G. A.—Application of Fan Laws.....July 1940 39
Hill, Fred M.—*Solving Pipe Problems*, A.S.M.E. Annual Meeting.....Dec. 1940 36
Hirsch, Geo. and A. S. Davis—High-Pressure Extension to Manchester St. Station.....Sept. 1940 26

PAGE

Iddles, Alfred—*What the User Should Know*, High Spots of the Midwest Power Conference.....May 1941 37
Joos, C. E.—Water-Conditioning Methods and Trends..Dec. 1940 38
Kellogg, C. W.—*Power and National Defense*, High Spots of the Midwest Power Conference.....May 1941 34
Kennedy, E. H. and H. Kreisinger, B. J. Cross—Furnace Temperature Measurements and Their Interpretation....Mar. 1941 37
Kittredge, A. E.—*Removal of Dissolved Gases*, High Spots of the Midwest Power Conference.....May 1941 38
Knox, S. L. G. and J. I. Yellott—*An Unique Engine and Boiler Unit*, A.S.M.E. Annual Meeting.....Dec. 1940 31
Kogan, Zuce—Fuel Oil Burning.....Nov. 1940 47
Kreisinger, Henry and B. J. Cross, E. H. Kennedy—Furnace Temperature Measurements and Their Interpretation..... Mar. 1941 37
Kuhner, Max. H.—*Boiler Settings*, A.S.M.E. Annual Meeting.... Dec. 1940 34
Leib, Dr. Erich F.—Enthalpy and Entropy, The First and Second Laws of Thermodynamics.....Oct. 1940 35
Viscosity of Steam, The.....Dec. 1940 45
How the C-E Steam Tables Were Derived.....Mar. 1941 48
Leihy, Maj. Charles W.—*Power and National Defense*, High Spots of the Midwest Power Conference.....May 1941 34
McCausey, R. J. and R. M. Van Duzer, Jr.—Installation of Thermocouples for Measuring Tube Temperatures...Aug. 1940 16
Macan, O. J.—Modernizing Settings of Traveling-Grate Stokers.. Nov. 1940 43
Maddock, William—pH by Simple Titration.....Aug. 1940 30
Maguire, John J. and L. D. Betz, C. A. Noll—*Methods of Silica Removal*, A.S.M.E. Annual Meeting.....Dec. 1940 28
Markson, A. A. and Y. A. Olson—The Flashing Calorimeter..... May 1941 51
Marshall, L. J.—Factors Influencing Selection of Steam Generating Equipment.....Nov. 1940 31
Matson, H. E.—Dresser Station Adds 50,000 Kw.....Apr. 1941 22
Mayers, M. A.—*Flow Processes in Underfeed Stokers*, A.S.M.E. Annual Meeting.....Dec. 1940 32
McLachlan, W. J.—*Power and National Defense*, High Spots of the Midwest Power Conference.....May 1941 35
McWhorter, R. B.—*Power and National Defense*, High Spots of Midwest Power Conference.....May 1941 34
Melas, William—Measuring Pulsating Flow.....May 1941 49
Mellor, C. and E. Patron Costas—Steam Generating Units at Argentine Sugar Plant of Ingenio San Martín de Tabacal..... Jan. 1941 22
Miller, C. E.—Buzzard Point Adds 100,000 Kw in the Nation's Capital.....Dec. 1940 20
Miller, H. K.—Steelton Plant Burns Coke Breeze and Anthracite on Traveling-Grate Stokers.....July 1940 26
Mindheim, J. and C. B. Arnold, R. T. Hanlon—*Treatment of Makeup at Waterside Stations*, A.S.M.E. Annual Meeting..... Dec. 1940 29
Moody, A. H.—The Significance of Iron in Coal Used for Combustion.....Feb. 1941 22
Murphy, B. S.—*Continuous Heat Balance Control of Boiler Room Operation*, A.S.M.E. Annual Meeting.....Dec. 1940 32
Nelson, E. E. and F. G. Straub—*Conductivity Determinations*, A.S.M.E. Annual Meeting.....Dec. 1940 29
Noll, C. A. and L. D. Betz, J. J. Maguire—*Methods of Silica Removal*, A.S.M.E. Annual Meeting.....Dec. 1940 28
Oatley, H. B.—Superheaters and Economizers, Their Design and Safe Operation.....June 1941 38
Olson, Y. A. and A. A. Markson—The Flashing Calorimeter..... May 1941 51
Pankey, T. L. and S. E. Tray—Removal of Silica from Industrial Boiler-Water Supplies.....Nov. 1940 39
Parsons, Chas. W.—*Increasing Steam Output*, High Spots of the Midwest Power Conference.....May 1941 35
Patterson, W. S.—Factors Affecting Metal Temperature of Furnace and Boiler Tubes.....Aug. 1940 24
Place, P. B.—Determination of Steam Quality with Throttling Calorimeter.....July 1940 29
Rakestraw, L. M. and E. G. Bailey—*Power in Ships*, A.S.M.E. Annual Meeting.....Dec. 1940 36
Reich, J. A.—Utilizing Refuse Coals at 12th St. Station, Richmond, Va.....Apr. 1941 43
Rice, Cyrus W.—Boiler Embrittlement Protection....Jan. 1941 37
Rice, W. E. and A. C. Fieldner—Ash-Bearing Constituents vs. Pulverizing Power (excerpt Annual Report of Research and Technologic Work on Coal by Bureau of Mines).....Jan. 1941 25
Rosencrants, F. H.—Recovery Unit for Sulphate Process Applied to Chemical Recovery and By-Product Steam Production..... Mar. 1941 44
Forced Circulation, High Spots of the Midwest Power Conference.....May 1941 36
Ruch, Alan—Putting a New Boiler in Service.....May 1941 47
Schroeder, Berk and O'Brien, Messrs.—Embrittlement Detector.. Aug. 1940 19
Smith, A. R. and E. S. Thompson—The Mercury-Vapor Process.. Apr. 1941 28
Smith, Lybrand—Efficiency Relationships.....Sept. 1940 31
Straub, Frederick G. and E. E. Nelson—*Conductivity Determinations*, A.S.M.E. Annual Meeting.....Dec. 1940 29
Water-Treatment Problems, High Spots of the Midwest Power Conference.....May 1941 38
Taube, H. R.—Oil Shale as Boiler Fuel.....July 1940 45
Thompson, E. S. and A. R. Smith—The Mercury-Vapor Process.. Apr. 1941 28
Tiger, H. L.—*Methods of Silica Removal*, A.S.M.E. Annual Meeting.....Dec. 1940 27
Tray, S. E. and T. L. Pankey—Removal of Silica from Industrial Boiler-Water Supplies.....Nov. 1940 39

PAGE

Upthegrove, C. and C. W. E. Clarke, A. E. White—*Condenser Tube Corrosion*, A.S.M.E. Annual Meeting.....Dec. 1940 35
Van Brunt, John—*Circulation in High-Pressure Boilers and Water-Cooled Furnaces*, A.S.M.E. Annual Meeting...Dec. 1940 33
Van Duzer, R. M., Jr. and R. J. McCausey—Installation of Thermocouples for Measuring Tube Temperatures...Aug. 1940 16
Warren, Glenn B.—High Speed Turbines.....July 1940 43
Watt, R. D. and H. W. Beecher—Combustion of Waste-Wood Products.....Sept. 1940 35
White, A. E. and C. L. Clark—Metals at High Temperatures in Power Plants.....July 1940 35
White, A. E. and C. W. E. Clarke, C. Upthegrove—*Condenser Tube Corrosion*, A.S.M.E. Annual Meeting.....Dec. 1940 35
White, A. E. and Sabin Crocker—*Effect of Grain Size in Steam Piping*, A.S.M.E. Annual Meeting.....Dec. 1940 36
Williams, Edward E.—More Power for Piedmont Carolinas at Cliffside.....Oct. 1940 22
Wood, Walter H.—Sizing of Coal for Chain- or Traveling-Grate Stokers.....Sept. 1940 39
Yellott, John I. and S. L. G. Knox—*An Unique Engine and Boiler Unit*, A.S.M.E. Annual Meeting.....Dec. 1940 31

STEAM ENGINEERING ABROAD—

Automatic Record of the Hydrogen Ion Concentration..Mar. 1941 51
Balanced Fluid-Pressure Measuring Device.....Feb. 1941 41
British Engineers and the War.....Aug. 1940 36
Brown Boveri Turbines.....Oct. 1940 39
Burning Corn in Argentine.....Feb. 1941 41
Centrifugal Pump with Rotating Casing.....Jan. 1941 41
Control of British Electricity Supply Construction.....Jan. 1941 42
Determining Grain Distribution in Dust Laden Air.....Sept. 1940 45
District Heating in Russia.....Mar. 1941 51
Entropy Diagram for Structural Materials, The.....Aug. 1940 35
Fineness of Grinding and Efficiency with Different Type Mills...Aug. 1940 35
Five-Year Power Development Plan in Manchoukuo...Mar. 1941 52
Fouling of Air Heaters.....Oct. 1940 40
Increased Power Consumption in South Africa.....Nov. 1940 57
Minimizing Standby Losses.....Sept. 1940 45
New Brown Boveri Turbine.....Feb. 1941 41
New Type of Classifier for Pulverizers.....Feb. 1941 42
Novel Steam Engine A.....Sept. 1940 46
Old Boiler Used as an Accumulator.....Nov. 1940 55
Power Development in Turkey.....Sept. 1940 48
Power Plant Targets.....May 1941 57
Power Production in Japan.....Jan. 1941 43
Powers of British Electricity Board Broadened.....Nov. 1940 55
Protection of Equipment Against Gas Attack.....Oct. 1940 39
Pulverized Coal in Engine Cylinder.....Jan. 1941 43
Pump Materials for High Steam Temperature.....Jan. 1941 43
Refuse-Burning Furnace.....Aug. 1940 37
Roll-Type Coupling, A.....Nov. 1940 56
Seat-In Sleeve Valves.....May 1941 58
Sizing of Coal on Traveling Grate.....Jan. 1941 42
Sulphur Dioxide, a Cause of Blade Corrosion.....Oct. 1940 40
Superheated Steam Cooler.....Aug. 1940 36
Status of German Boiler Construction.....Nov. 1940 55
Temperature Measurement of Gas Turbine Runners...Oct. 1940 41
Transverse Oscillations of Chimneys.....May 1941 59
Tube Failure Due to Sudden Steam Demand.....Jan. 1941 41
Turbine Rope Drive.....May 1941 57
Utilizing Low-Head Heat.....May 1941 57
Velox Units in Holland.....Sept. 1940 47
Water-Level Indicator.....May 1941 61

REVIEW OF NEW BOOKS—

A.I.M.E. Transactions of the Coal Division, 1940, Vol. 139....Nov. 1940 53
A.S.T.M. Specifications for Pipe and Piping Materials for High-Temperature and High-Pressure Services, The.....Feb. 1941 44
Applied Chemistry for Engineers. By Eric S. Gyngell..Feb. 1941 44
Applied Heat Transmission. By Herman J. Stoever....May 1941 62
Boiler House and Power Station Chemistry. By Wilfred Francis.Nov. 1940 53
Coal. By Elwood S. Moore.....July 1940 49
Correcting Oil Burner Deficiencies. By Zuce Kogan....May 1941 62
Design of Piping for Flexibility with Flex-Anal Charts. By E. A. Wert and S. Smith.....July 1940 49
Dictionary of Metals and Their Alloys. Edited by F. J. Camm..July 1940 49
Electric Power Statistics. By Federal Power Comm...July 1940 49
Fuels and Their Utilization. By A. R. Carr and C. W. Selheimer.....July 1940 50
Gas and Oil Engines. By P. S. Caldwell.....July 1940 50
Heating, Ventilating, Air Conditioning Guide for 1941. By American Society of Heating and Ventilating Engineers.....May 1941 62
Introduction to the Kinetic Theory of Gases, An. By Sir James Jeans.....Nov. 1940 53
1940–1941 Standards on Coal and Coke. By A.S.T.M. Committee D-5 on Coal and Coke.....May 1941 62
Practical Mathematics. By G. M. Hobbs, J. McKinney and J. R. Dalzell.....Nov. 1940 53
Pumps. By Frank A. Kristal and F. A. Annett.....Nov. 1940 53
Steam Turbine Principles and Practice. By Terrell Croft, Revised by S. A. Tucker.....Feb. 1941 44
Technical Dictionary.....Feb. 1941 45
Wage and Hour Manual, 1940 Edition. By The Bureau of National Affairs, Inc.....July 1940 50

CLASSIFIED INDEX—

PAGE

Auxiliaries

Application of Fan Laws. By G. A. Hendrickson.....July 1940 39
Chemical Cleaning of Heat Exchangers. By John M. Drabelle..Apr. 1941 47
High Spots of the Midwest Power Conference, *Increasing Steam Output* (*Instruments and Controls*). Charles W. Parsons.....May 1941 35
High Spots of the Midwest Power Conference, *Variable-Speed Drives*. G. V. Edmonson.....May 1941 39
Installation of Thermocouples for Measuring Tube Temperatures. By R. M. Van Duzer, Jr. and R. J. McCausey.....Aug. 1940 16
Measuring Pulsating Flow. By William Melas.....May 1941 49
Operation of Centrifugal Boiler-Feed Pumps. By Hans Gartmann.....Jan. 1941 33

Boilers

A.S.M.E. Annual Meeting, *Boiler Settings*.....Dec. 1940 34
A.S.M.E. Annual Meeting, *Circulation in High-Pressure Boilers and Water-Cooled Furnaces*.....Dec. 1940 33
A.S.M.E. Annual Meeting, *Twin Furnace Boilers*.....Dec. 1940 33
A.S.M.E. Annual Meeting, *An Unique Engine and Boiler Unit*....Dec. 1940 31
Boiler Inspectors Meet at New York.....June 1941 40
Factors Affecting Metal Temperature of Furnace and Boiler Tubes. By W. S. Patterson.....Aug. 1940 24
Factors Influencing Selection of Steam Generating Equipment. By L. J. Marshall.....Nov. 1940 31
Flashing Calorimeter, The. By A. A. Markson and Y. A. Olson..May 1941 51
Forced Circulation on a Large Scale (Editorial).....Aug. 1940 15
High Spots of the Midwest Power Conference, *Forced Circulation*. F. H. Rosencrants.....May 1941 36
High Spots of the Midwest Power Conference, *Increasing Steam Output* (*Boiler Output*). Prof. R. S. Hawley.....May 1941 35
Lampblack Fired Under Boiler at Honolulu Gas Co., Ltd. By T. C. Beatty.....Apr. 1941 39
Large Forced-Circulation Boiler for Somerset Station...Aug. 1940 21
Mercury-Vapor Process, The. By A. R. Smith and E. S. Thompson.....Apr. 1941 28
Million-Pound per Hour Boiler Tops Sherman Creek Station.....Sept. 1940 34
Putting a New Boiler in Service. By Alan Ruch.....May 1941 47
Some Early Boiler Designs.....Nov. 1940 34
Waste Heat Boilers. By J. B. Crane.....Jan. 1941 27

Chimneys

Low-Cost Flue-Dust Sampler.....Aug. 1940 23
Plan of Smoke Abatement Suggested for Pittsburgh....June 1941 46
Recovery of SO_2 from Stack Gases.....Feb. 1941 37
Size Grading Applied to Terminal Velocity of Fly Ash and Other Dusts. By Hudson H. Bubar.....June 1941 36

Coals

A.S.M.E. Annual Meeting, *Coal-Ash Fusing Temperature*.....Dec. 1940 30
Appalachian Coals, Inc. Fuel Engineering Conference.....July 1940 47
Bituminous Coal Prices Announced.....Aug. 1940 31
Controlling Characteristics of Ash, With Special Reference to Illinois and Indiana Coals. By Joseph Harrington..May 1941 41
Significance of Iron in Coal Used for Combustion, The. By Dr. A. H. Moody.....Feb. 1941 22
Some Probable Effects of Minimum Coal Prices (Edit.).Sept. 1940 25
Turbulence and Combustion in Pulverized Coal Furnaces. By B. J. Cross.....Nov. 1940 49

Combustion

Combustion of Waste-Wood Products. By H. W. Beecher and R. D. Watt.....Sept. 1940 35
Recovery of SO_2 from Stack Gases.....Feb. 1941 37
Significance of Iron in Coal Used for Combustion. By Dr. A. H. Moody.....Feb. 1941 22
Turbulence and Combustion in Pulverized Coal Furnaces. By B. J. Cross.....Nov. 1940 49

Feedwater and Boiler Water

A.S.M.E. Annual Meeting, *Condenser Tube Corrosion*...Dec. 1940 35
A.S.M.E. Annual Meeting, *Methods of Silica Removal*..Dec. 1940 27
A.S.M.E. Annual Meeting, *Treatment of Makeup at Waterside Stations*.....Dec. 1940 29
Boiler Embrittlement Protection. By Cyrus W. Rice..Jan. 1941 37
Determination of Steam Quality With Throttling Calorimeter. By P. B. Place.....July 1940 29
Economizer Corrosion.....Sept. 1940 29
Economy in Boiler Water Recirculation. By M. D. Baker.....Oct. 1940 31
Embrittlement Detector. By Messrs. Schroeder, Berk and O'Brien.....Aug. 1940 19
High Spots of the Midwest Power Conference, *Removal of Dissolved Gases*. A. E. Kittredge.....May 1941 38
High Spots of the Midwest Power Conference, *Water-Treatment Problems*. Prof. F. G. Straub.....May 1941 38
pH by Simple Titration. By William Maddock.....Aug. 1940 30

PAGE

Physical Aspects of Steam Generation at High Pressures. By R. F. Davis....Feb. 1941 33
Removal of Silica from Industrial Boiler-Water Supplies. By S. E. Tray and T. L. Pankey....Nov. 1940 39
Water-Conditioning Methods and Trends. By C. E. Joos....Dec. 1940 38
Water Treatment at South Omaha Steam-Electric Station. By R. R. Briggs....Feb. 1941 27

Fuels (General)

A.S.M.E. Annual Meeting, *Fuel-Bed Observations on Multiple-Retort Stoker*....Dec. 1940 32
Factors Influencing Selection of Steam Generating Equipment. By L. J. Marshall....Nov. 1940 31
Flashing Calorimeter, The. By A. A. Markson and Y. A. Olson..May 1941 51
Fuel Consumption by Industry....June 1941 44
Fuel Oil Burning. By Zuce Kogan....Nov. 1940 47
Oil Shale as Boiler Fuel. By H. R. Taube....July 1940 45
Steelton Plant Burns Coke Breeze and Anthracite on Traveling-Grate Stokers. By H. K. Miller....July 1940 26

Furnaces

A.S.M.E. Annual Meeting, *Boiler Settings*....Dec. 1940 34
A.S.M.E. Annual Meeting, *Circulation in High-Pressure Boilers and Water-Cooled Furnaces*....Dec. 1940 33
A.S.M.E. Annual Meeting, *Twin Furnace Boilers*....Dec. 1940 33
Factors Affecting Metal Temperature of Furnace and Boiler Tubes. By W. S. Patterson....Aug. 1940 24
Furnace Temperature Measurements and Their Interpretation. By H. Kreisinger, B. J. Cross and E. H. Kennedy....Mar. 1941 37
Turbulence and Combustion in Pulverized Coal Furnaces. By B. J. Cross....Nov. 1940 49

General Practice, Developments and Trends

High Spots of the Midwest Power Conference, *Power Trends*. Prof. A. G. Christie....May 1941 36
Steam Generation Trends in 1940....Sept. 1940 42
Trends in Steam Plant Development. By Prof. A. G. Christie..Apr. 1941 35
Water-Conditioning Methods and Trends. By C. E. Joos....Dec. 1940 38

Heat Recovery

A.S.M.E. Annual Meeting, *Boiler Settings*....Dec. 1940 27
Economizer Corrosion....Sept. 1940 29
Superheaters and Economizers, Their Design and Safe Operation. By H. B. Oatley....June 1941 38

Installations

Atlantic Gelatin Company, Inc., Woburn, Mass.
Steam Generating Plant of the Atlantic Gelatin Company, Inc. By Albert A. Fava....June 1941 32
Buzzard Point Station, Potomac Electric Power Company, Washington, D.C.
Buzzard Point Adds 100,000 Kw in the Nation's Capital. By C. E. Miller....Dec. 1940 20
Cliffside Steam Station, Duke Power Co., Cliffside, N. C.
More Power for Piedmont Carolinas at Cliffside. By Edward E. Williams....Oct. 1940 22
Dresser Generating Station, Public Service Co. of Indiana
Dresser Station Adds 50,000 Kw. By H. E. Matson..Apr. 1941 22
Honolulu Gas Company, Ltd., Honolulu, Hawaii
Lampblack Fired Under Boiler at Honolulu Gas Co., Ltd. By T. C. Beatty....Apr. 1941 39
Ingenio San Martín de Tabacal, Messrs. Patron Costas and Mosoteguy, Province of Salta, Argentine
Steam Generating Units at Argentine Sugar Plant of Ingenio San Martín de Tabacal. By C. Mellor and E. Patron Costas....Jan. 1941 22
Manchester St. Station, The Narragansett Electric Co., Providence, R. I.
High-Pressure Extension to Manchester St. Station. By A. S. Davis and George Hirsch....Sept. 1940 26
Port Washington Station, Wisconsin Electric Power Co., Milwaukee, Wisc.
Port Washington Station Sustains Its High Performance, Editorial.....Feb. 1941 21
Sherman Creek Station, Consolidated Edison Co. of N. Y., Inc., New York
Million-Pound per Hour Boiler Tops Sherman Creek Station....Sept. 1940 34
Somerset Station, Montaup Electric Co., Somerset, Mass.
Large Forced-Circulation Boiler for Somerset Station...Aug. 1940 21
South Omaha Steam-Electric Station, Nebraska Power Company
Water Treatment at South Omaha Steam-Electric Station. By R. R. Briggs....Feb. 1941 27
Springdale Station, West Penn Power Company, Pittsburgh, Pa.
Economy in Boiler Water Recirculation. By M. D. Baker....Oct. 1940 31
Steelton Plant, Bethlehem Steel Co., Steelton, Pa.
Steelton Plant Burns Coke Breeze and Anthracite on Traveling-Grate Stokers. By H. K. Miller....July 1940 26
12th St. Station, Virginia Electric & Power Co., Richmond, Va.
Utilizing Refuse Coals at 12th St. Station, Richmond, Va. By J. A. Reich....Apr. 1941 43
Waterside Station, Consolidated Edison Co. of N. Y., Inc.
A.S.M.E. Annual Meeting, *Treatment of Makeup at Waterside Stations*....Dec. 1940 29

PAGE

Westport Station, Consolidated Gas Electric Light & Power Company, Baltimore, Md.
Baltimore Initiates Expansion Program With 25,000-Kw Topping Unit. By H. N. Boetcher and G. S. Harris....Mar. 1941 32
Windsor Station, West Penn Power Co., Power, W. Va.
West Penn Tops Windsor....July 1940 42

Marine Practice

A.S.M.E. Annual Meeting, *Power in Ships*....Dec. 1940 36
Power Plant of the S.S. *America*....July 1940 37

Refuse Fuels

Combustion of Waste-Wood Products. By H. W. Beecher and R. D. Watt....Sept. 1940 35
Lampblack Fired Under Boiler at Honolulu Gas Co., Ltd. By T. C. Beatty....Apr. 1941 39
Utilizing Refuse Coals at 12th St. Station, Richmond, Va. By J. A. Reich....Apr. 1941 43

Research

Controlling Characteristics of Ash, With Special Reference to Illinois and Indiana Coals. By Joseph Harrington...May 1941 41
Mercury-Vapor Process, The. By A. R. Smith and E. S. Thompson....Apr. 1941 28

Steam Pressures, Temperatures and Cycles

A.S.M.E. Annual Meeting, *Circulation in High-Pressure Boilers and Water-Cooled Furnaces*....Dec. 1940 33
A.S.M.E. Annual Meeting, *Conductivity Determinations* (degasifying steam condenser)....Dec. 1940 29
Determination of Steam Quality With Throttling Calorimeter. By P. B. Place....July 1940 29
Enthalpy and Entropy. By Dr. Erich F. Leib....Oct. 1940 35
Factors Affecting Metal Temperature of Furnace and Boiler Tubes. By W. S. Patterson....Aug. 1940 24
Factors Influencing Selection of Steam Generating Equipment. By L. J. Marshall....Nov. 1940 31
High-Pressure Extension to Manchester St. Station. By A. S. Davis and George Hirsch....Sept. 1940 26
How the C-E Steam Tables Were Derived. By Dr. E. F. Leib..Mar. 1941 48
Installation of Thermocouples for Measuring Tube Temperatures. By R. M. Van Duzer, Jr. and R. J. McCausey....Aug. 1940 16
Metals at High Temperatures in Power Plants. By A. E. White and C. L. Clark....July 1940 35
Physical Aspects of Steam Generation at High Pressures. By R. F. Davis....Feb. 1941 33
Superheaters and Economizers, Their Design and Safe Operation. By H. B. Oatley....June 1941 45
Viscosity of Steam. By Dr. E. F. Leib....Dec. 1940 38

Stokers

A.S.M.E. Annual Meeting, *Fuel-Bed Observations on Multiple-Retort Stoker*....Dec. 1940 32
Factors Influencing Selection of Steam Generating Equipment. By L. J. Marshall....Nov. 1940 31
Giant Stokers, Cedar Plant, Pennsylvania Power & Light Co., Harrisburg....Nov. 1940 30
Modernizing Settings of Traveling-Grate Stokers. By O. J. Macan....Nov. 1940 43
Sizing of Coal for Chain- or Traveling-Grate Stokers. By Walter Wood....Sept. 1940 39
Steelton Plant Burns Coke Breeze and Anthracite on Traveling-Grate Stokers. By H. K. Miller....July 1940 26

Turbine-Generators

A.S.M.E. Annual Meeting, *Turbine Lubrication*....Dec. 1940 34
High Spots of the Midwest Power Conference, *Steam Turbine Design*. C. C. Franck....May 1941 36
High-Speed Turbines. Glenn B. Warren....July 1940 43
Mercury-Vapor Process. By A. R. Smith & E. S. Thompson....Apr. 1941 28

Miscellaneous

A.S.M.E. Annual Meeting....Dec. 1940 27
Effect of Grain Size in Steam Piping....Dec. 1940 36
Solving Pipe Problems....Dec. 1940 36
A.S.T.M. Papers Discuss Creep....Aug. 1940 22
Application of Heat Insulation. By E. C. Hasse....June 1941 24
Boiler Inspectors Meet at New York....June 1941 40
Efficiency Relationships. By Lybrand Smith....Sept. 1940 31
Factors Influencing Selection of Steam Generating Equipment. By L. J. Marshall....Nov. 1940 31
High Spots of the Midwest Power Conference....May 1941 34
Interchange Contracts Between Industrial Plants and Utilities. John T. Davis....May 1941 39
Power and National Defense. Major Chas. W. Leihy, C. W. Kellogg, R. B. McWhorter, W. J. McLachlan....May 1941 34
Priorities of Men. Harvey N. Davis....May 1941 39
What the User Should Know. Alfred Iddles....May 1941 37
Industrial Machinery That Passes With Sale of Premises. By Leslie Childs....Jan. 1941 39
Metals at High Temperatures in Power Plants. By A. E. White and C. L. Clark....July 1940 35
Recovery Unit for Sulphate Process. By F. H. Rosencrants....Mar. 1941 44
Some Further Power Statistics....Oct. 1940 43
Spanish Terms for Steam Equipment....Jan. 1941 40